Philips Consumer Electronics

Technical Service Data

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Scope Patterns

REFER TO SAFETY GUIDELINES

SAFETY NOTICE: ANY PERSON ATTEMPTING TO SERVICE THIS CHASSIS MUST FAMILIARIZE HIMSELF WITH THE CHASSIS AND BE AWARE OF THE NECESSARY SAFETY PRECAUTIONS TO BE USED WHEN SERVICING ELECTRONIC EQUIPMENT CONTAINING HIGH VOLTAGES.

CAUTION: USE A SEPARATE ISOLATION TRANSFORMER FOR THIS UNIT WHEN SERVICING

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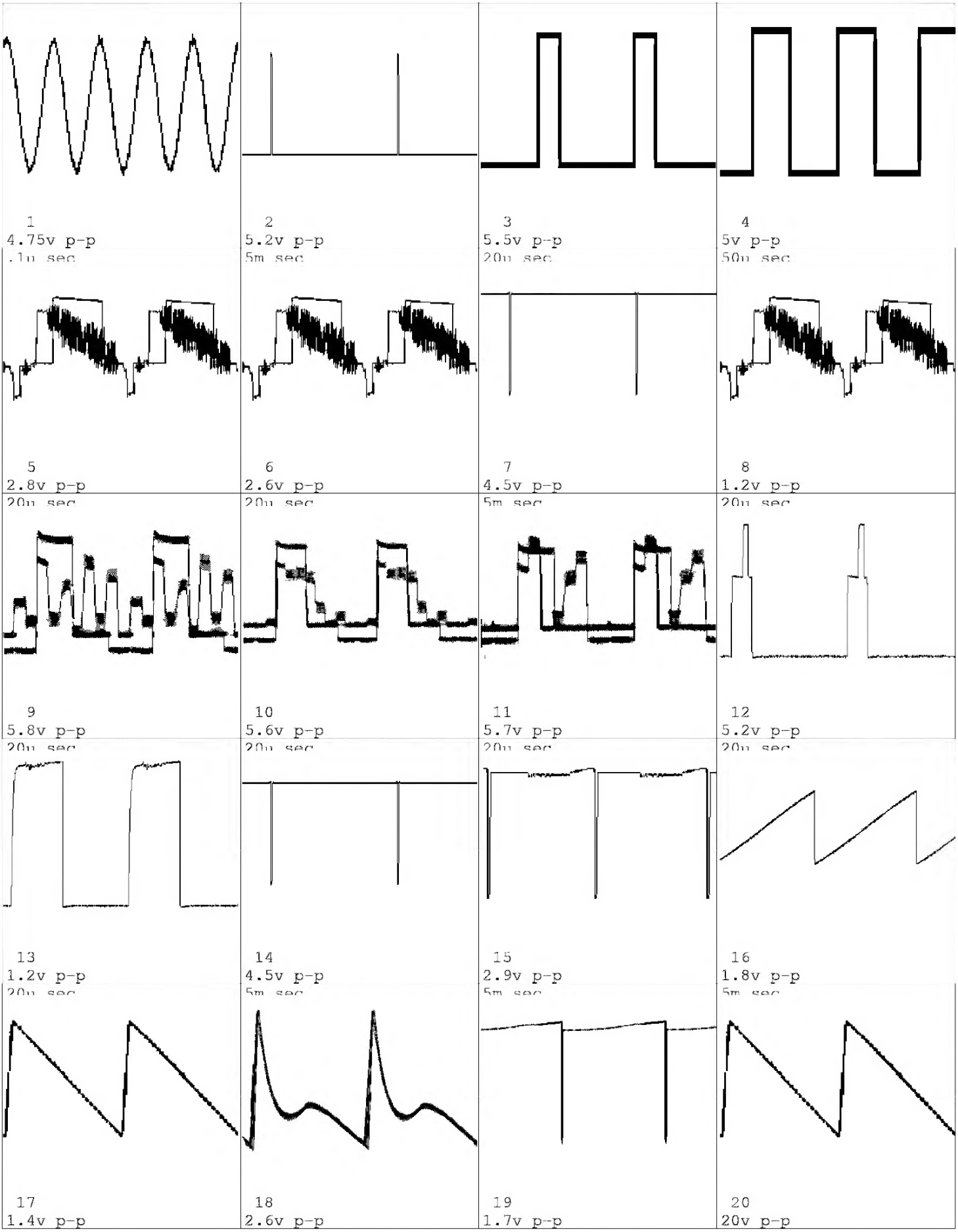
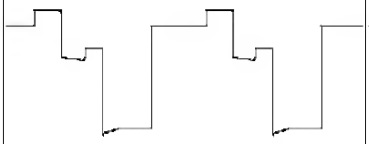
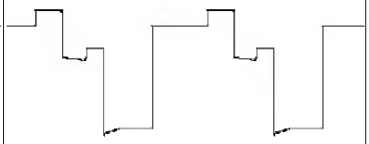

1
4.75v p-p
.1u sec
2
5.2v p-p
5m sec
3
5.5v p-p
20u sec
4
5v p-p
50u sec
5
2.8v p-p
6
2.6v p-p
7
4.5v p-p
8
1.2v p-p
20u sec
20u sec
5m sec
20u sec
9
5.8v p-p
10
5.6v p-p
11
5.7v p-p
12
5.2v p-p
20u sec
20u sec
20u sec
20u sec
13
1.2v p-p
14
4.5v p-p
15
2.9v p-p
16
1.8v p-p
20u sec
5m sec
5m sec
5m sec
17
1.4v p-p
18
2.6v p-p
19
1.7v p-p
20
20v p-p
5m sec
5m sec
5m sec
5m sec

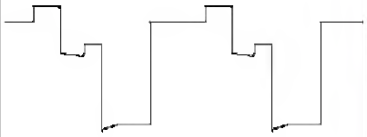
21
1.9v p-p
5m sec



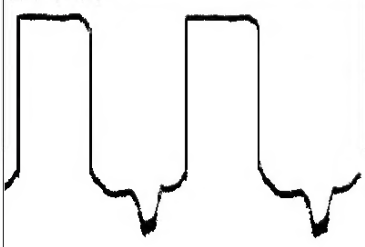
22
3.2v p-p
20u sec



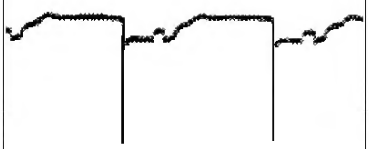
23
3.2v p-p
20u sec



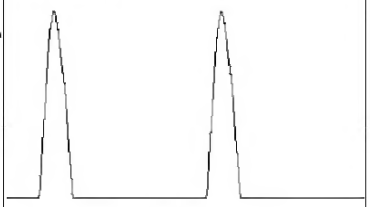
24
3.2v p-p
20u sec



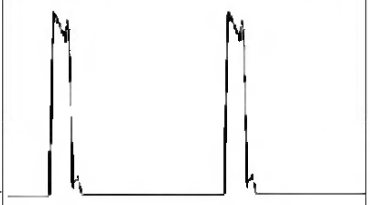
25
.6v p-p
20u sec



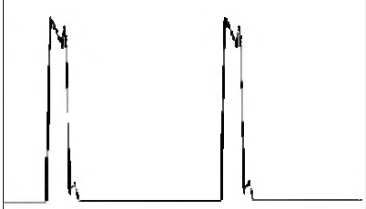
26
15v p-p
20u sec



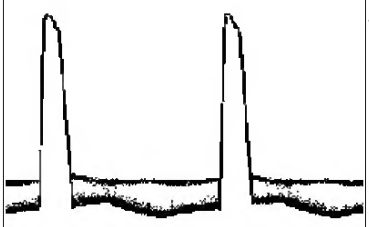
27
1130v p-p
20u sec



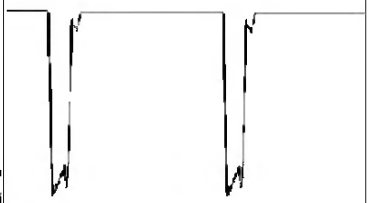
28
80v p-p
20u sec



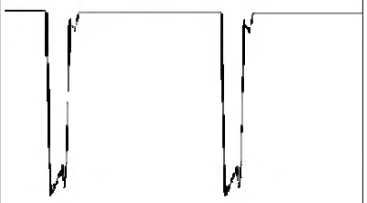
29
30v p-p
20u sec



30
25v p-p250v
20u sec

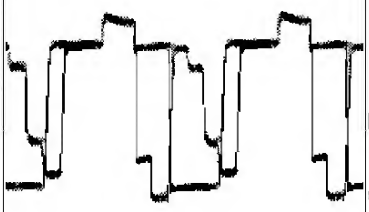


31
250v p-p
20u sec



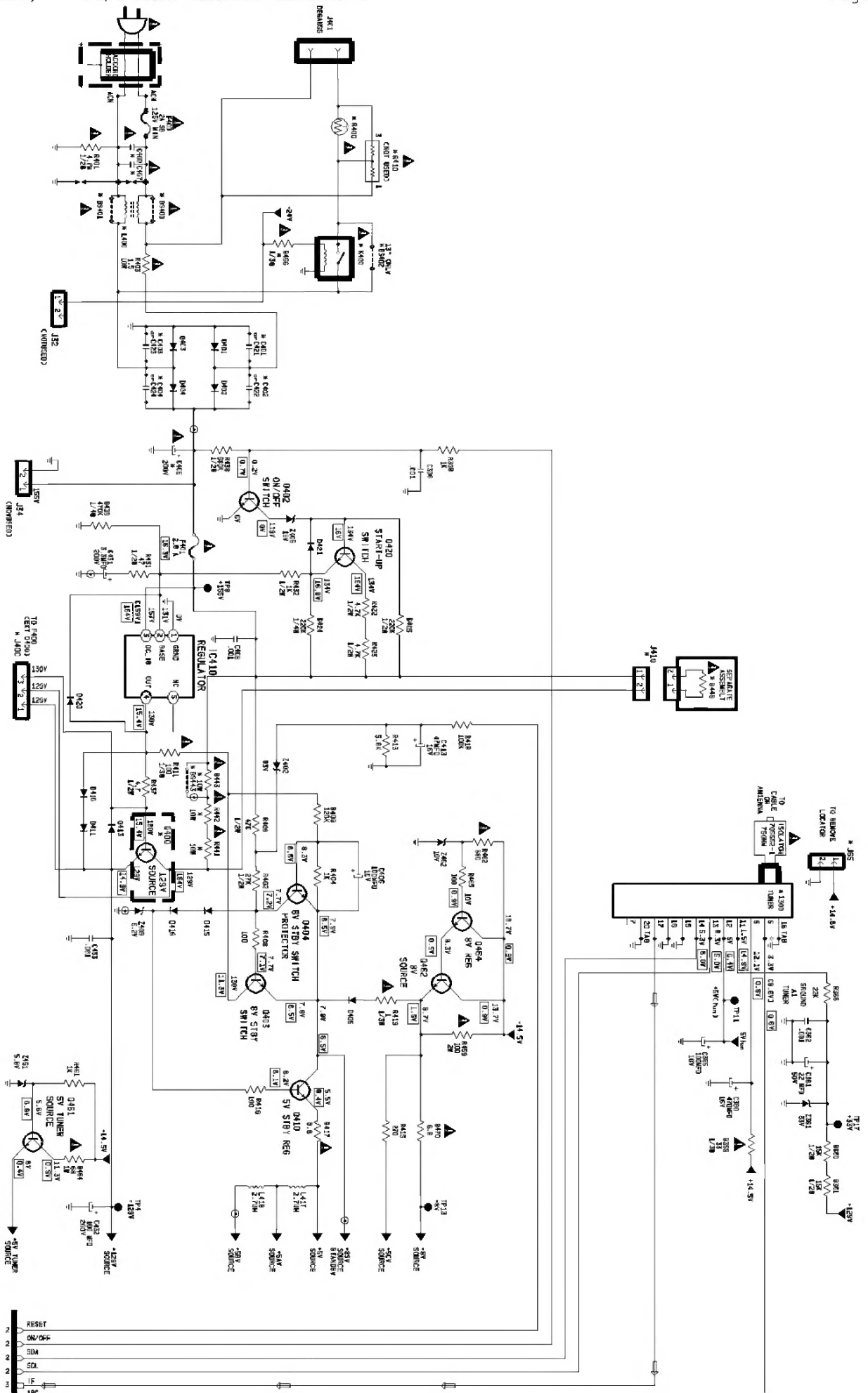
32
140v p-p
2m sec

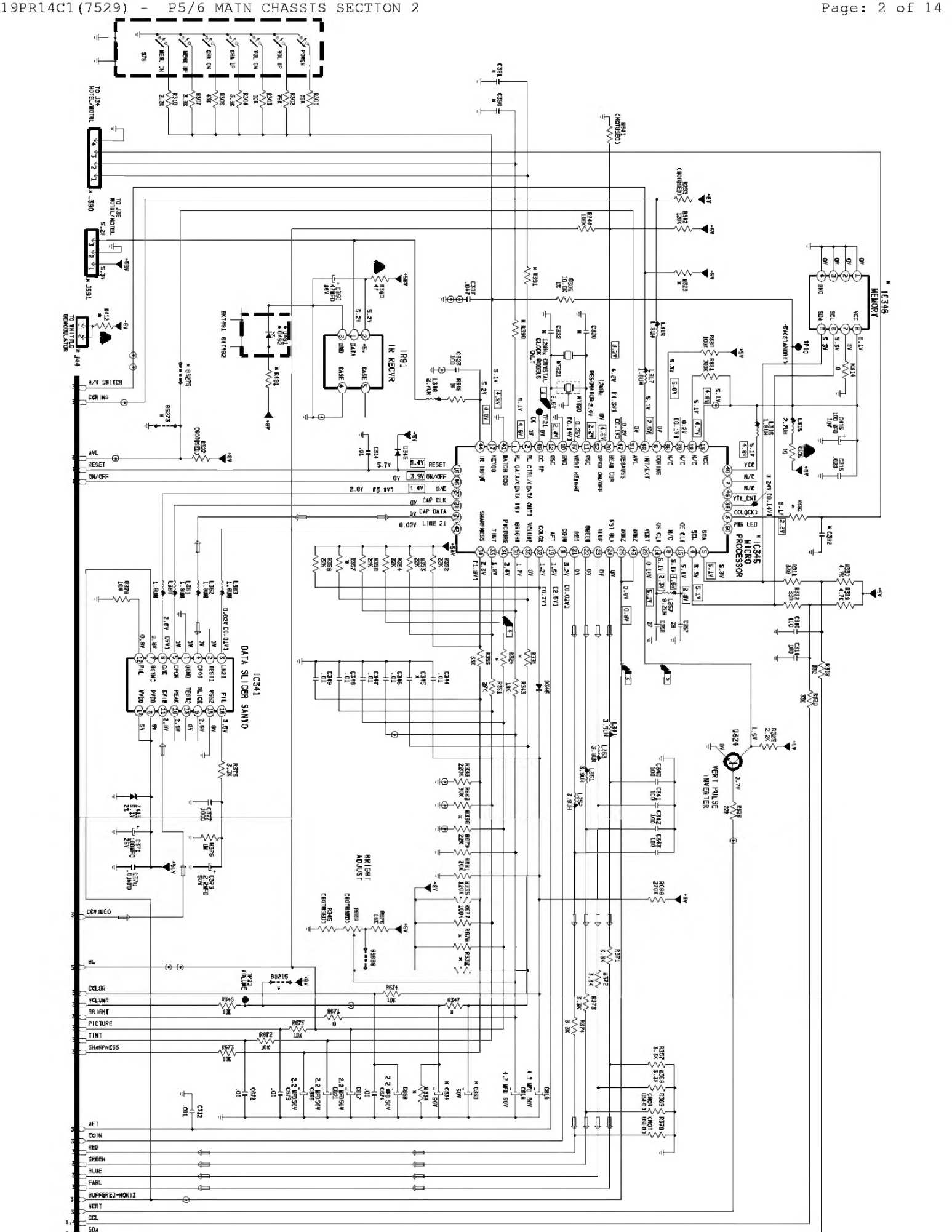
33
138v p-p
20µ sec

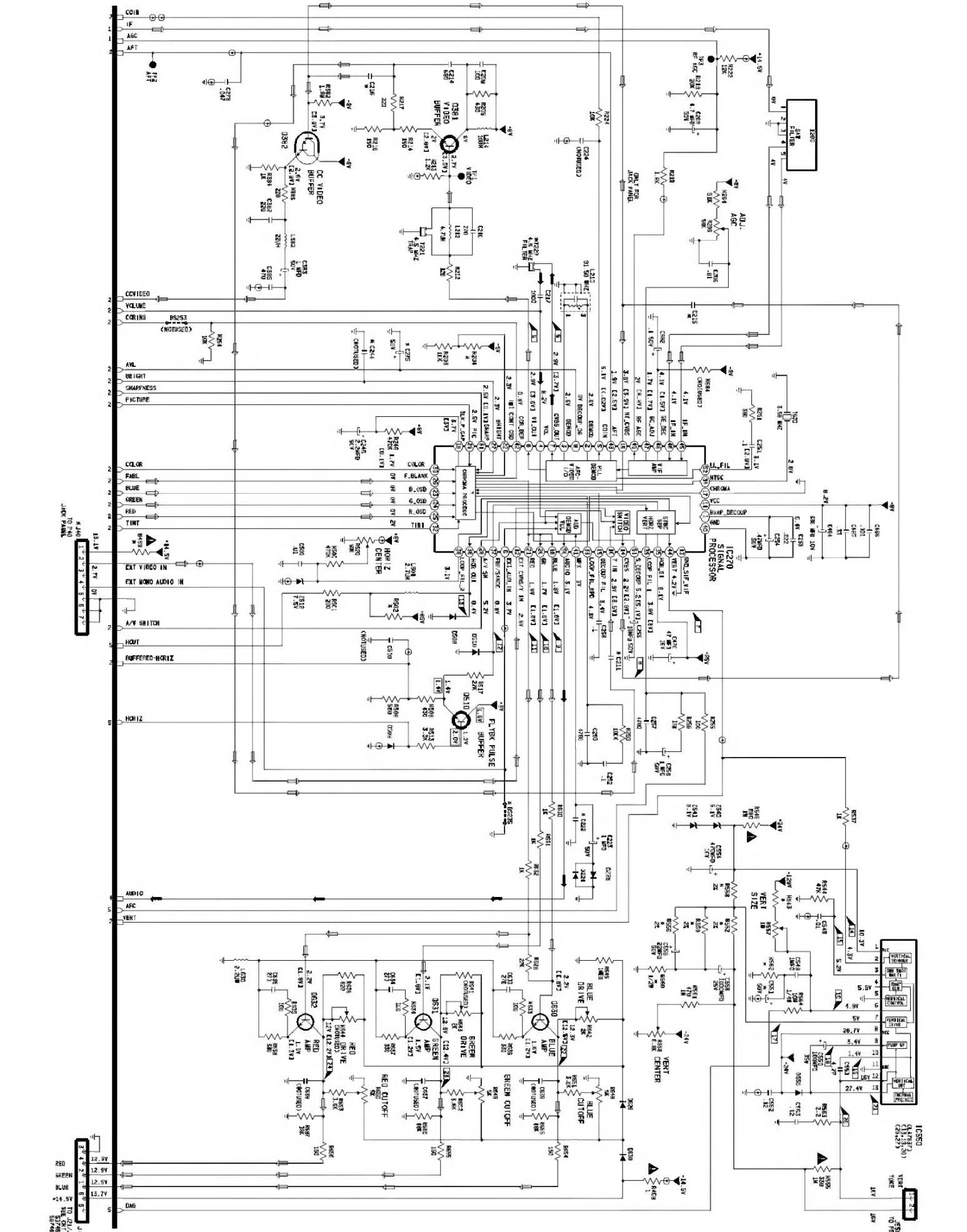


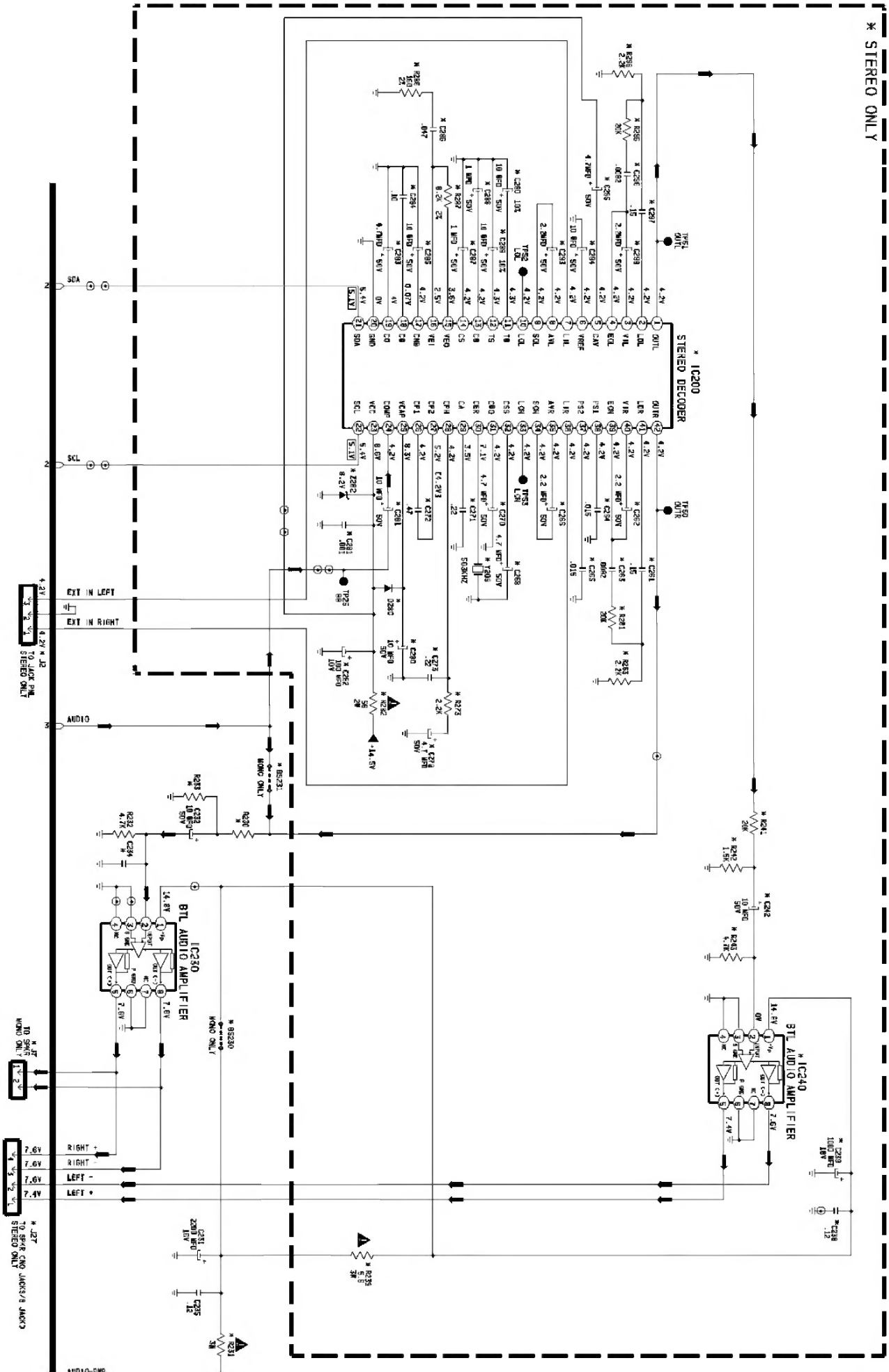
34
120v p-p
20µ sec

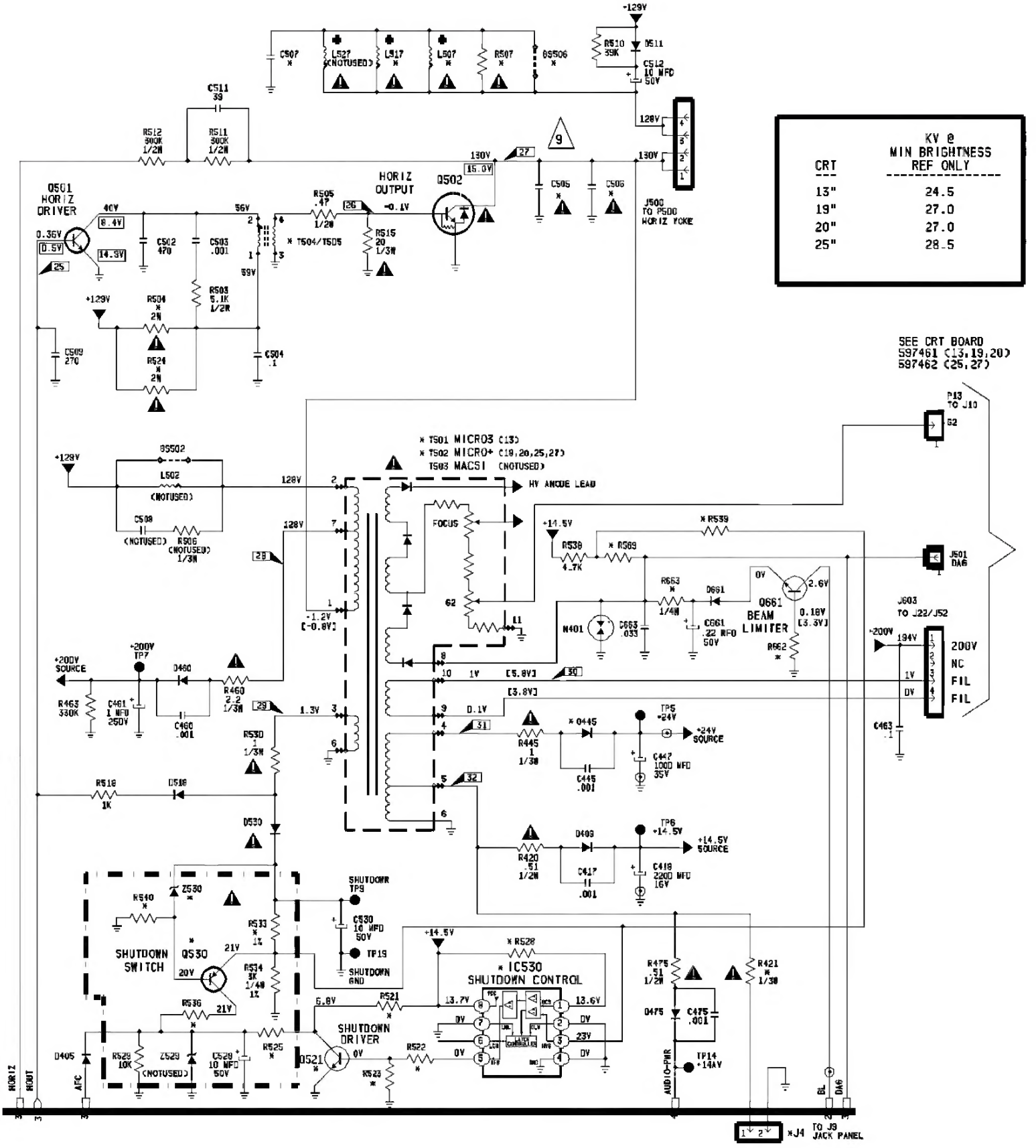
35
130v p-p
20µ sec

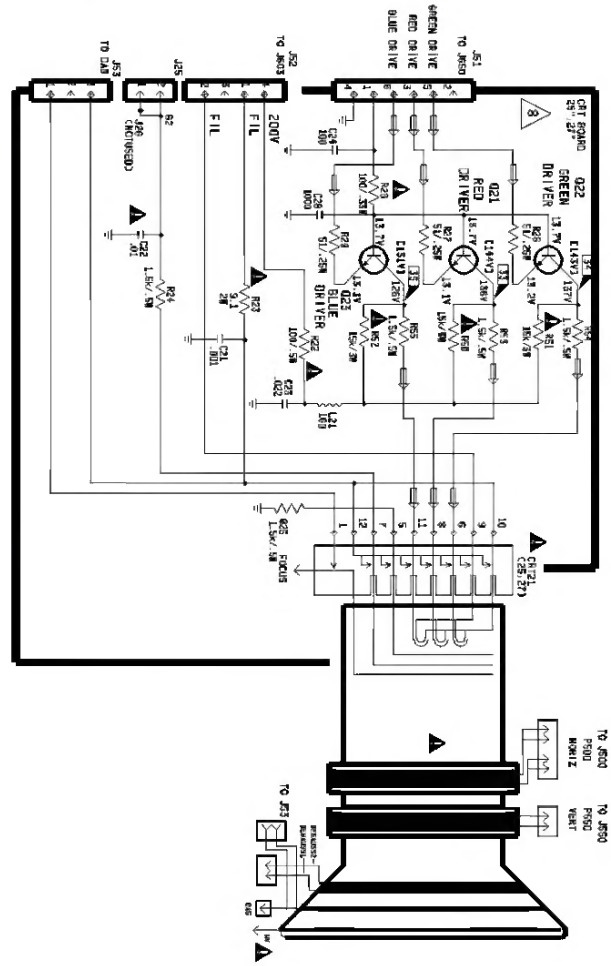

JK1
DEGAUSS
JS2
CHASSIS
JS4
CHASSIS
D402
ON/OFF
SWITCH
D420
START-UP
SWITCH
IC410
REGULATOR
J410
SPEAKER
ASSEMBLY
D420
D404
8V STBY SWITCH
PROTECTOR
D464
8V REG
D462
8V
SOURCE
D405
8V STBY
SWITCH
D410
5V STBY REG
D451
5V TUNER
SOURCE
D415
L23V
SOURCE
TO F400
(LEFT SIDE)
J400
130V
129V
125V
ISOLATION
TRANSFORMER
75OHM
TO CABLE
ANTENNA
TO REMOTE
LOCATOR
J55
TUNER
1300
TP4
+123V
TP11
+5V
TP13
+5V
TP17
+43V
+14.5V
+123V
+5V TUNER
SOURCE
+123V
SOURCE
+5V
SOURCE
+5V
SOURCE
+5

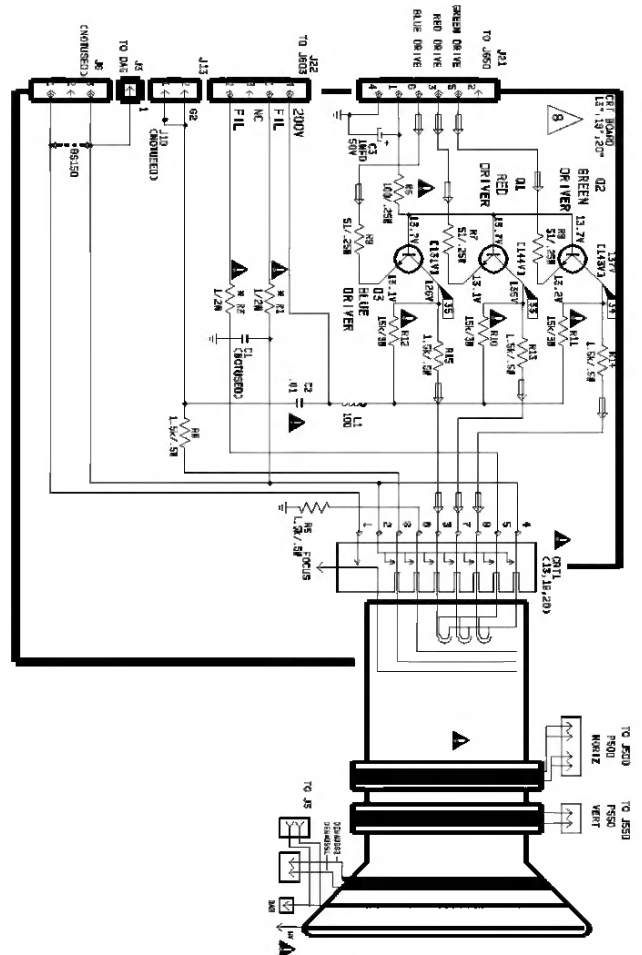

IC346 MEMORY
IC345 MICRO PROCESSOR
IC341 DATA SLICER SANTO
IR REAR
BRIGHT ADJUST
VERT PHASE INVERTER
A/V SWITCH
COMING
AVL
RESET
ON/OFF
CAP CLK
CAP DATA
LINE 21
COLOR
VOLUME
BRIGHT
PICTURE
TINT
SHARPNESS
COMPVIDEO
AFT
COIN
RED
GREEN
BLUE
FABL
BUFFERED-HORIZ
VERT
SCL
SDA

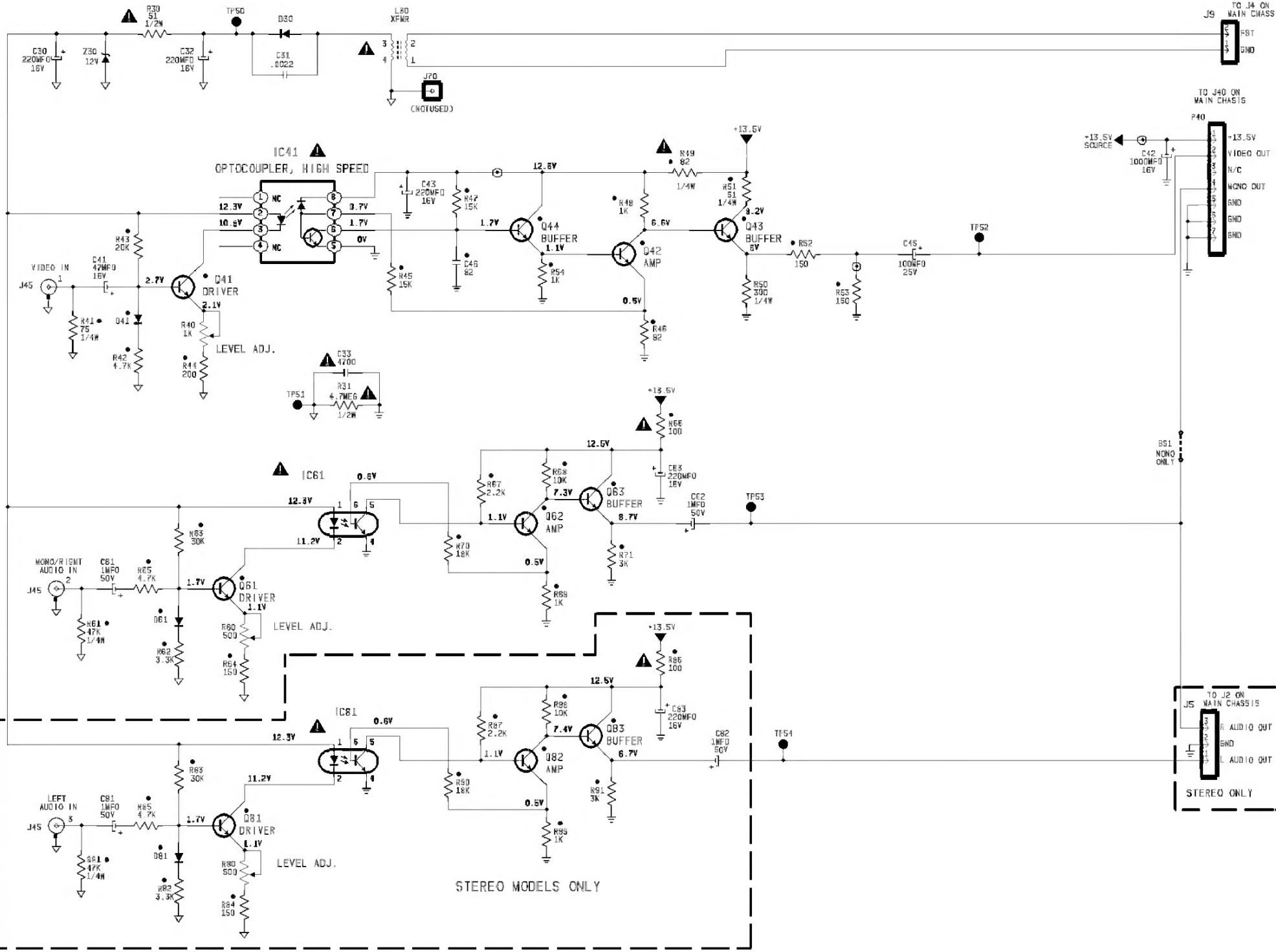

CVIDEO
VOLUME
CORING
AVL
BRIGHT
SHARPNESS
PICTURE
COLOR
TINT
EXT VIDEO IN
EXT MONO AUDIO IN
A/V SWITCH
HOUT
BUFFERED-HORIZ
HORIZ
AUDIO
AFC
VERT
RED
GREEN
BLUE
DAG
IC270 SIGNAL PROCESSOR
DC VIDEO BUFFER
FLYBK PULSE BUFFER
HOR I/Z CENTER
VERT SIZE
VERT CENTER
RED DRIVE AMP
GREEN DRIVE AMP
BLUE DRIVE AMP
RED CUTOFF
GREEN CUTOFF
BLUE CUTOFF

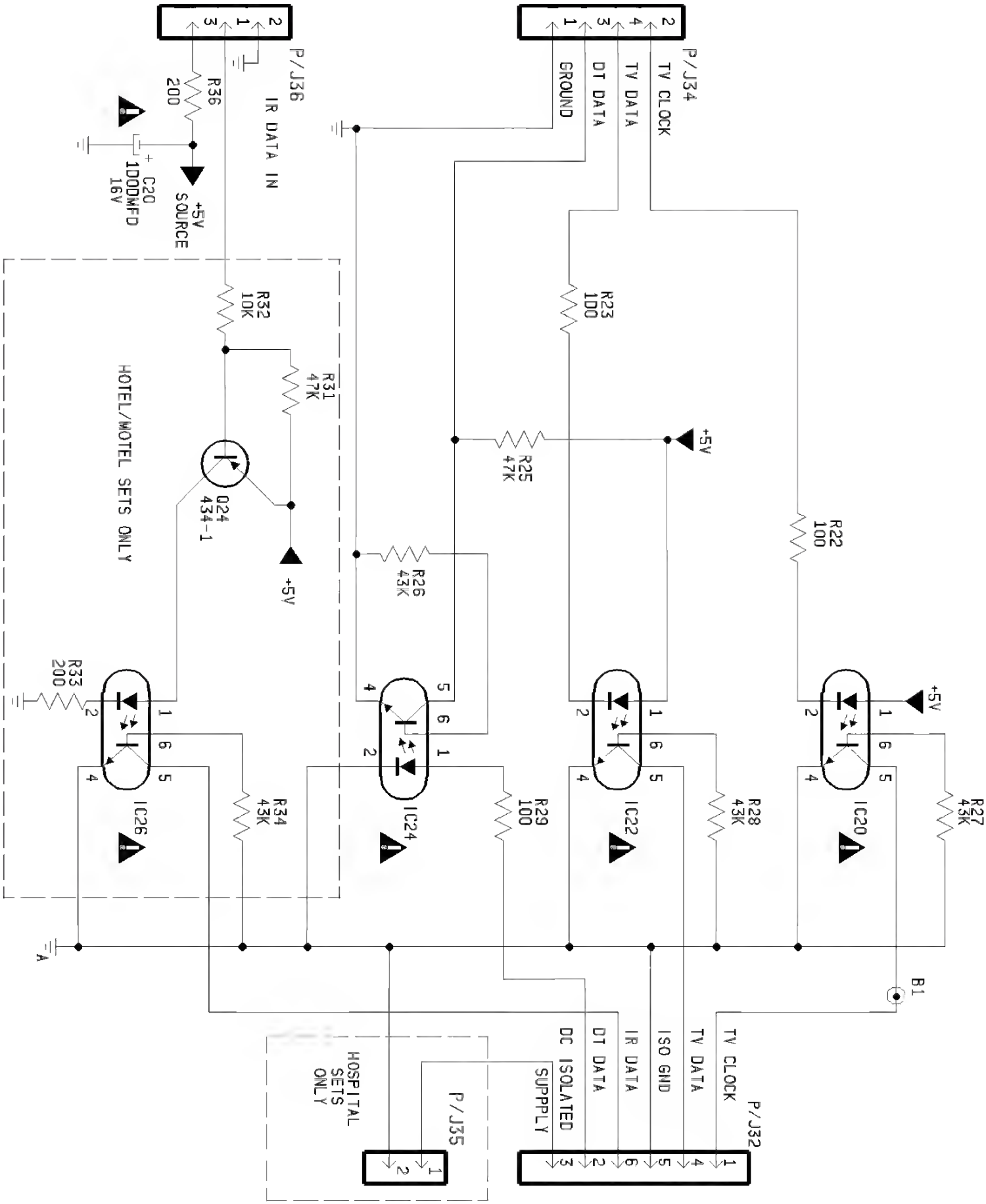

* STEREO ONLY
* IC200
STEREO DECODER
SDA
SCL
EXT IN LEFT
EXT IN RIGHT
AUDIO
TO JACK PWB
STEREO ONLY
BTL AUDIO AMPLIFIER
IC230
* IC240
BTL AUDIO AMPLIFIER
MONO ONLY
RIGHT +
RIGHT -
LEFT -
LEFT +
TO SPKR CMD JACKS/8 JACKS
STEREO ONLY

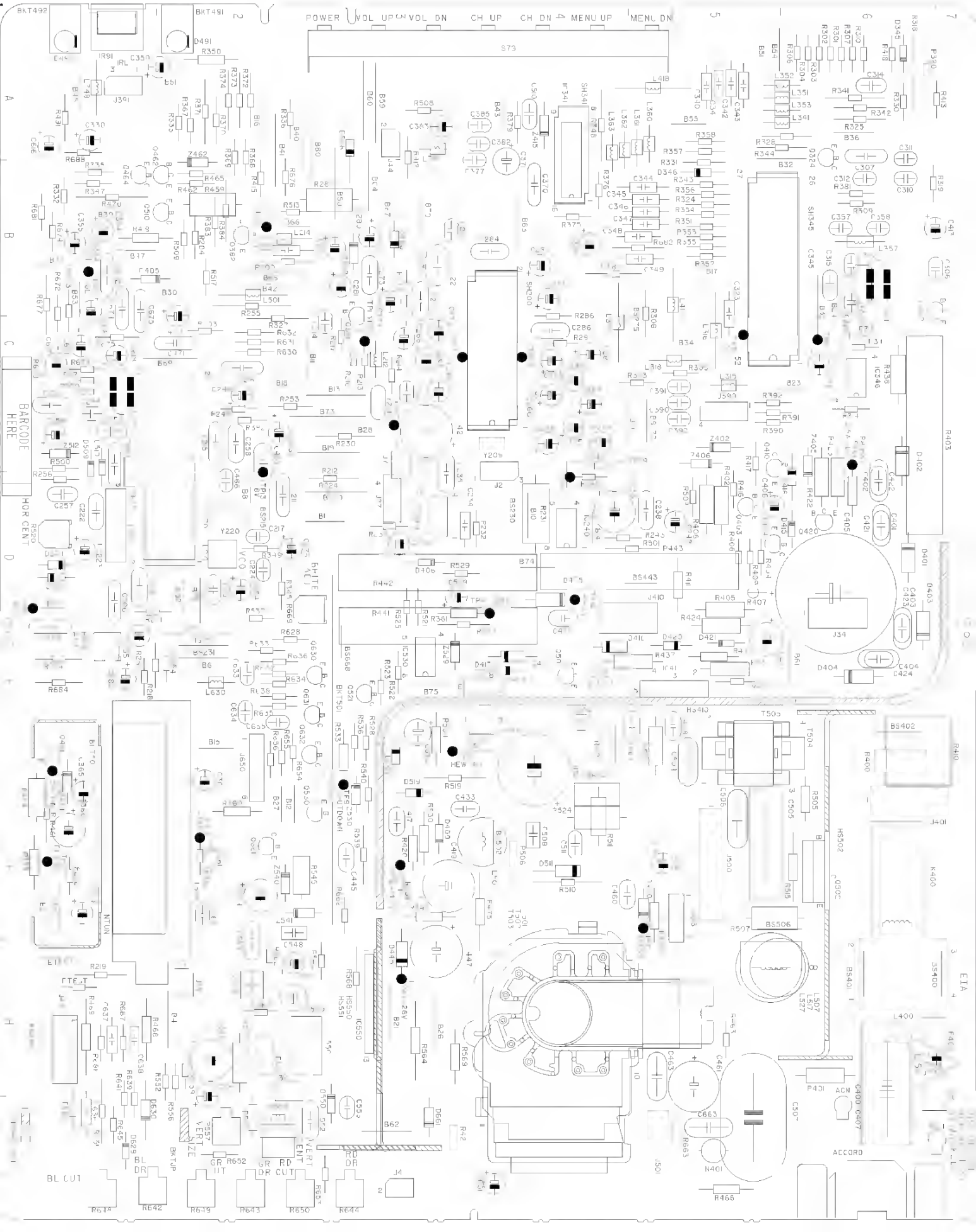

+129V
C507
L527 (NOTUSED)
L517
L507
R507
RS506
R510 39K
D511
C512 10 MFD 50V
C511 39
R512 300K 1/2W
R511 300K 1/2W
128V
130V
15.0V
HORIZ OUTPUT
Q502
C505
C506
J500 TO PSDG HORIZ YOKE
Q501 HORIZ DRIVER
40V
8.4V
0.36V
0.5V
14.3V
56V
59V
C502 470
C503 .001
R505 .47 1/2W
T504/T505
R515 20 1/3W
R503 5.1K 1/2W
R504 2W
R524 2W
C509 270
C504 .1
CRT | KV @ MIN BRIGHTNESS REF ONLY
13" 24.5
19" 27.0
20" 27.0
25" 28.5
SEE CRT BOARD 597461 (13,19,20) 597462 (25,27)
T501 MICRO3 (13)
T502 MICRO+ (19,20,25,27)
T503 MACSI (NOTUSED)
HV ANODE LEAD
RS502
L502 (NOTUSED)
C508 (NOTUSED)
R506 (NOTUSED) 1/3W
FOCUS
-1.2V (-0.8V)
+14.5V
R538 4.7K
R539
R569
R663 1/4W
D661
Q661 BEAM LIMITER
2.6V
0.18V (3.3V)
R562
N401
C663 .033
C661 .22 MFD 50V
J603 TO J22/J52
+200V
194V
200V
NC
FIL
FIL
J501 DA6
P13 TO J10
G2
+200V SOURCE
+200V TP7
D460
R460 2.2 1/3W
R463 330K
C461 1 MFD 250V
C460 .001
1.3V
R530 1/3W
R518 1K
D518
D530
10 1V (5.8V)
(3.8V)
9 0.1V
4
5
6
R445 1 1/3W
RS445
C445 .001
TP5 +24V
+24V SOURCE
C447 1000 MFD 35V
R420 .51 1/2W
D409
TP6 +14.5V
+14.5V SOURCE
C417 .001
C418 2200 MFD 16V
C463 .1
SHUTDOWN SWITCH
Q530
Z530
R540
R533 1%
R534 3K 1/4W 1%
21V
20V
R536
SHUTDOWN TP9
C530 10 MFD 50V
TP15
SHUTDOWN GND
SHUTDOWN DRIVER
Q521
R521
5.8V
R525
R522
R523
D405
R529 10K
Z529 (NOTUSED)
C529 10 MFD 50V
AFC
HORIZ
VOUT
IC530 SHUTDOWN CONTROL
RS528
13.7V
13.6V
23V
R475 .51 1/2W
R421 1/3W
C475 .001
TP14 +14AV
AUDIO-PWR
BL
DA6
J4
TO J9 JACK PANEL

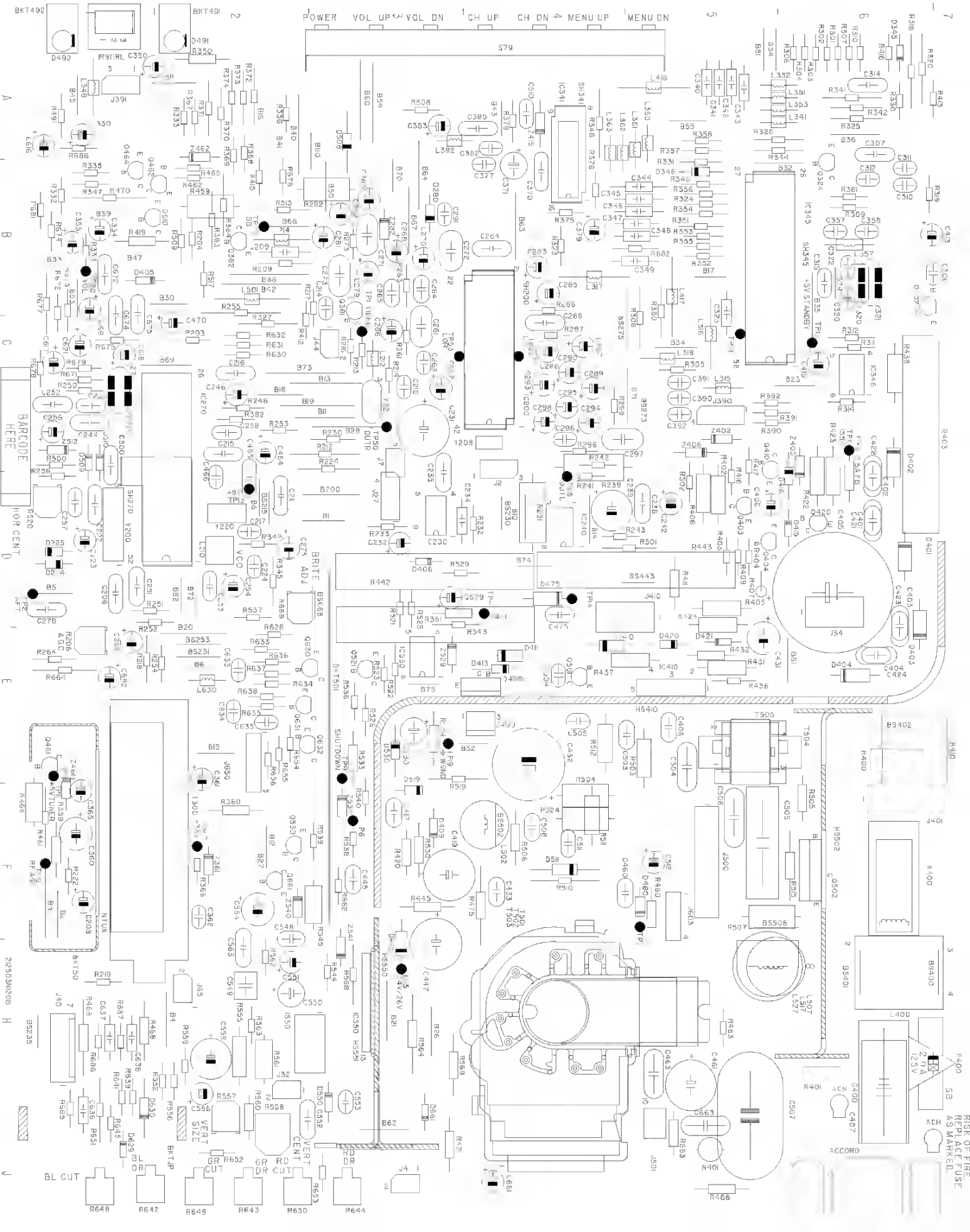


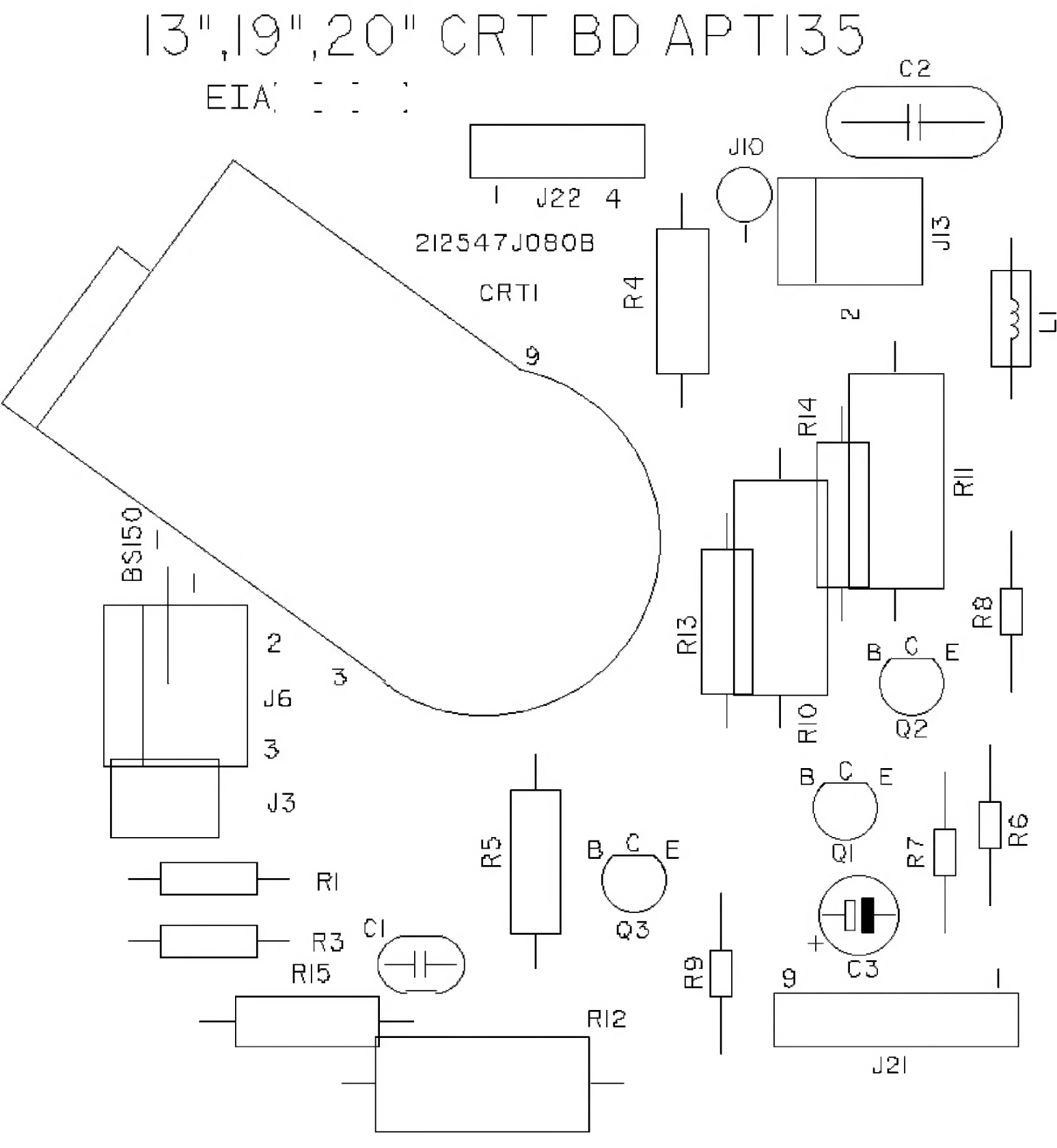


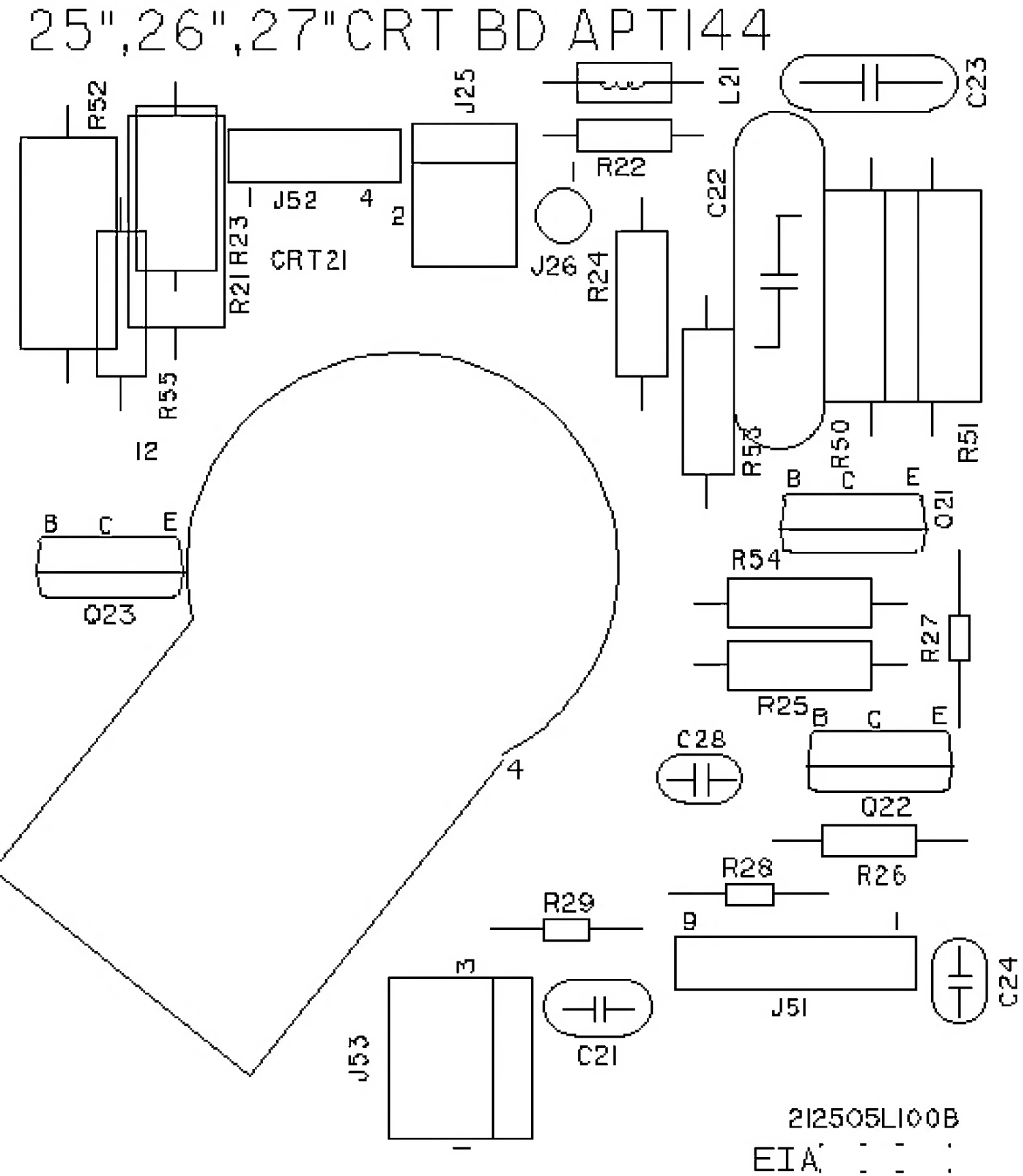

R30 51 1/2W
TP50
D30
L30 XFMR
C30 220MFD 16V
Z30 12V
C32 220MFD 16V
C31 .0022
J70 (NOTUSED)
J9
TO J4 ON MAIN CHASS
FBT
GND
TO J40 ON MAIN CHASIS
P40
+13.5V SOURCE
C42 1000MFD 16V
+13.5V
VIDEO OUT
N/C
MONO OUT
GND
IC41
OPTOCOUPLER, HIGH SPEED
NC
12.3V
10.8V
3.7V
1.7V
0V
C43 220MFD 16V
R42 15K
R45 15K
C46 82
12.6V
1.7V
Q44 BUFFER
1.1V
R54 1K
R49 82 1/4W
R48 1K
6.6V
Q42 AMP
0.5V
R46 82
R51 51 1/4W
4.2V
Q43 BUFFER
8V
R50 300 1/4W
R52 150
R53 150
C45 100MFD 25V
TP52
VIDEO IN
J45
C41 47MFD 16V
R43 20K
2.7V
Q41 DRIVER
2.1V
R40 1K
LEVEL ADJ.
R44 200
R41 75 1/4W
D41
R42 4.7K
C33 4700
TP51
R31 4.7ME6 1/2W
+13.5V
R66 100
C63 220MFD 16V
12.5V
IC61
0.6V
12.3V
11.2V
R67 2.2K
R68 10K
7.3V
Q63 BUFFER
8.7V
C62 1MFD 50V
TP53
1.1V
Q62 AMP
0.5V
R69 1K
R71 3K
R70 18K
MONO/RISMT AUDIO IN
J45
C61 1MFD 50V
R65 4.7K
R63 30K
1.7V
Q61 DRIVER
1.1V
LEVEL ADJ.
R60 500
R64 150
R61 47K 1/4W
D61
R62 3.3K
BS1 MONO ONLY
+13.5V
R86 100
C83 220MFD 16V
12.5V
IC81
0.6V
12.3V
11.2V
R87 2.2K
R88 10K
7.4V
Q83 BUFFER
6.7V
C82 1MFD 50V
TP54
1.1V
Q82 AMP
0.5V
R89 1K
R91 3K
R90 18K
LEFT AUDIO IN
J45
C81 1MFD 50V
R85 4.7K
R83 30K
1.7V
Q81 DRIVER
1.1V
LEVEL ADJ.
R80 500
R84 150
R81 47K 1/4W
D81
R82 3.3K
STEREO MODELS ONLY
TO J2 ON MAIN CHASSIS
J5
R AUDIO OUT
GND
L AUDIO OUT
STEREO ONLY

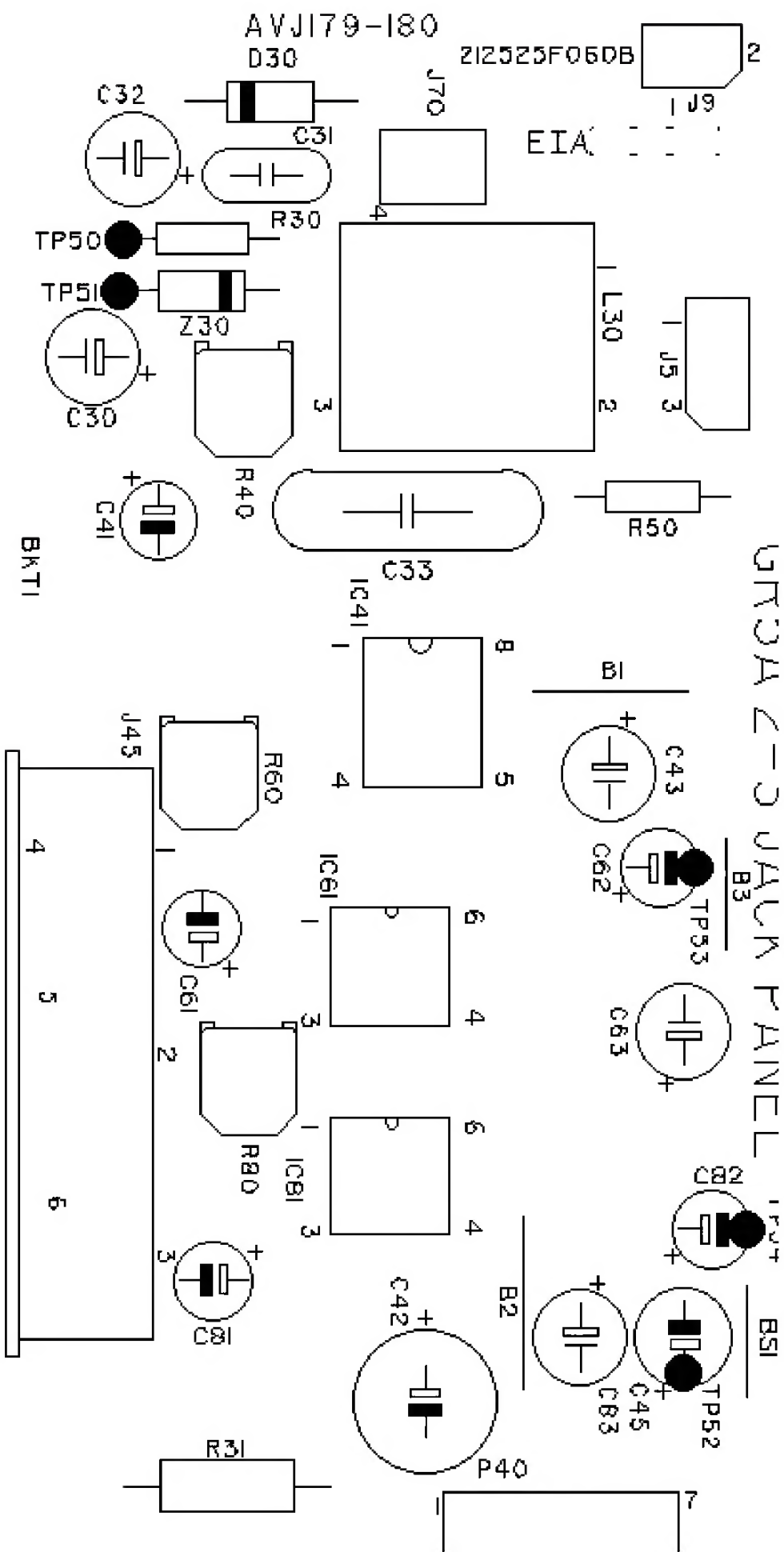

P/J34
GROUND
DT DATA
TV DATA
TV CLOCK
P/J36
IR DATA IN
R36
200
C20
1000MFD
16V
+5V
SOURCE
R23
1DO
R22
100
R25
47K
+5V
R32
10K
R31
47K
HOTEL/MOTEL SETS ONLY
Q24
434-1
+5V
R26
43K
R33
200
R34
43K
R29
100
R28
43K
R27
43K
+5V
IC26
IC24
IC22
IC20
A
B1
P/J32
TV CLOCK
TV DATA
ISO GND
IR DATA
DT DATA
DC ISOLATED
SUPPLY
P/J35
HOSPITAL
SETS
ONLY

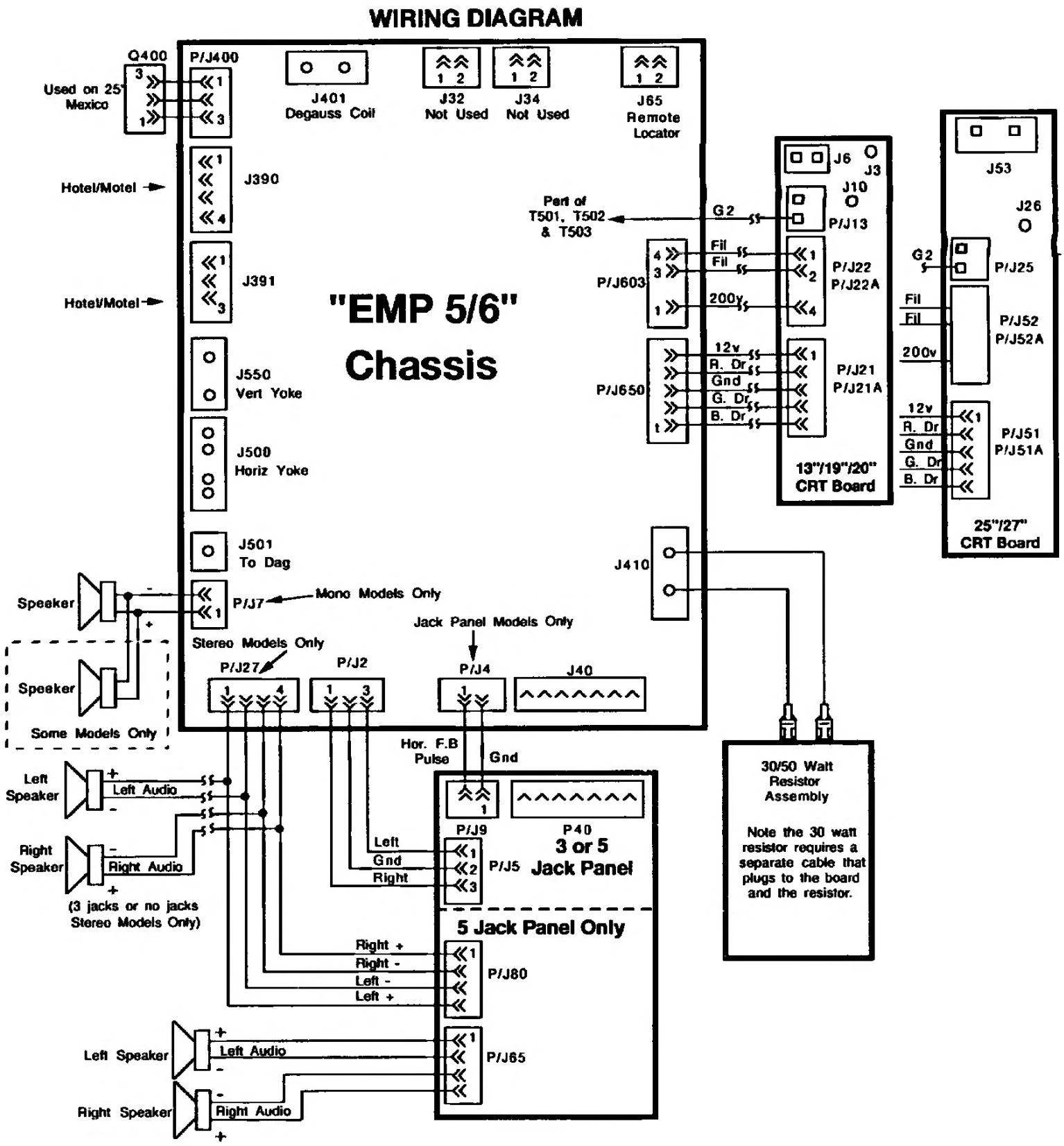

POWER
VOL UP
VOL DN
CH UP
CH DN
MENU UP
MENU DN
BARCODE HERE
HOR CENT
VERT SIZE
VERT CENT
BL CUT
GR RD CUT
ACCORD


POWER
VOL UP
VOL DN
CH UP
CH DN
MENU UP
MENU DN
BARCODE HERE
HOR CENT
BRITE ADJ
VERT SIZE
VERT CENT
BL CUT
GR CUT
RD CUT
SHUTDOWN
+5V STANDBY
ACCORD
RISK OF FIRE REPLACE FUSE AS MARKED


13",19",20" CRT BD APT135
EIA
C2
J10
J22
1
4
J13
212547J080B
CRT1
R4
2
L1
9
R14
R11
BS150
R13
R8
2
J6
3
B
C
E
Q2
R10
3
J3
R5
B
C
E
Q1
R7
R6
R1
Q3
R3
C1
C3
R9
R15
9
1
R12
J21


25",26",27"CRT BD APT144
R52
J25
L21
C23
R22
J52
4
1
2
C22
R21
R23
CRT21
J26
R24
R55
12
R53
R50
R51
B
C
E
Q21
Q23
R54
R27
R25
C28
Q22
R26
R28
R29
9
1
J51
C24
3
J53
C21
212505L100B
EIA


AVJ179-180
D30
C32
C31
R30
TP50
TP51
Z30
C30
R40
C41
BKT1
C33
R50
J70
J9
L30
J5
IC41
B1
C43
C62
TP53
B3
C63
J45
R60
C61
IC61
R80
IC81
C82
B2
C42
C45
C83
TP52
B51
C81
R31
P40


WIRING DIAGRAM
"EMP 5/6" Chassis
Q400
Used on 25" Mexico
P/J400
J401 Degauss Coil
J32 Not Used
J34 Not Used
J65 Remote Locator
Hotel/Motel
J390
J391
J550 Vert Yoke
J500 Horiz Yoke
J501 To Dag
Part of T501, T502 & T503
G2
P/J13
P/J603
Fil
200v
P/J22
P/J22A
P/J650
12v
R. Dr
Gnd
G. Dr
B. Dr
P/J21
P/J21A
J6
J3
J10
13"/19"/20" CRT Board
J53
J26
P/J25
P/J52
P/J52A
P/J51
P/J51A
25"/27" CRT Board
J410
Speaker
P/J7
Mono Models Only
Stereo Models Only
Jack Panel Models Only
P/J27
P/J2
P/J4
J40
Some Models Only
Hor. F.B Pulse
Gnd
Left Speaker
Left Audio
Right Speaker
Right Audio
(3 jacks or no jacks Stereo Models Only)
P/J9
P40
3 or 5 Jack Panel
P/J5
Left
Gnd
Right
5 Jack Panel Only
Right +
Right -
Left -
Left +
P/J80
P/J65
30/50 Watt Resistor Assembly
Note the 30 watt resistor requires a separate cable that plugs to the board and the resistor.